A Case of Seborrheic Blepharitis; Treatment with Itraconazole

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Abstract

We report a case of seborrheic blepharitis treated with oral itraconazole during a short period. Direct examination using Parker KOH revealed numerous hyphae and spores of Malassezia in the scale. Low-dose itraconazole pulse therapy (200 mg daily, 7 days a month) was quite effective. This is the second case in which we also observed a unique fungal conformation which looked like tinea versicolor. The evidence strongly suggests that Malassezia is one of the major causative agents of seborrheic blepharitis.

Key words: seborrheic blepharitis, Malassezia, itraconazole

Introduction

Seborrheic blepharitis is a common disease in ophthalmology. It is generally believed that hypersecretion of the Moll gland may cause the disease, but no one has confirmed this hypothesis, and the mechanism involved is still unknown.

Here we report a case of seborrheic blepharitis, which was treated with oral itraconazole. We suspected Malassezia to be one of the major causative agents of this condition.

Patient

A seventy-seven-year-old Japanese man had suffered from itching on his eyelid and in his ear since April 2000, but did not have them examined. He visited our outpatient clinic on July 1st, 2000.

The patient had a history of inhaling oxitropium bromide and taking theophylline tablets daily for a chronic obstructive pulmonary disease. He had injured a toenail when he was a crew member of the battleship Yamato during WWII.

At his initial visit to our outpatient clinic, we observed some scales on the margin of the right upper and the left lower eyelid (Fig. 1). We also found pity scale in the inner portion of the right ear. He complained of severe itching. In addition, the nails of his fingers and toes were thick and white.

Microscopic examination of samples from the eyelid and the ear using Parker KOH revealed numerous hyphae and spores which looked like “meatballs and spaghetti” which are usually seen in tinea versicolor (Fig. 2). We determined them to be Malassezia morphologically. No further identification was made. On the basis of the clinical features and those morphological findings, we made a diagnosis of seborrheic blepharitis and seborrheic dermatitis caused by Malassezia.

Direct examination also revealed many hyphae in the nail sample and we diagnosed this as tinea unguium.

As treatment for both diseases, we started low-dose pulse therapy using itraconazole (200 mg daily, 7 days a month). Soon after the first administration, the scales and itching of the eyelid disappeared (Fig. 3); the itching in the ear also disappeared but the scales were still present. After the second administration, the scales in the ear disappeared. Direct examinations of samples from both sites were negative. The patient was still taking itraconazole for his complication, tinea unguium. By February 2nd, 2001 he had gone through 5 cycles of the therapy, and 2 months after the cessation of treatment no recurrence was observed on the eyelid or in the ear.
Recognition of "blepharitis" differs in Western and Eastern countries. In English, "blepharitis" refers to inflammation of the eyelid. The term "marginal blepharitis" is occasionally used, but where inflammation occurs is not generally considered. On the contrary, in the Japanese textbook, inflammation of the margin of the eyelid is usually distinguished from other types of the disease, and is categorized as either non-infectious "seborrheic (squamous) blepharitis" or infectious "ulcerative blepharitis".

The clinical feature of seborrheic blepharitis is swelling and/or edema of the margin of the eyelid. Seborrhea and scales develop, along with yellowish crusts; there is no ulceration. Itching is slight or entirely absent.

As mentioned above, seborrheic blepharitis is thought to be related with hypersecretion of sebaceous glands on the margin of the eyelid. Thygeson and Gots et al. earlier suggested a relationship between seborrheic blepharitis and Malassezia species. But Malassezia in the lesion was believed to be a saprophyte and thought not to cause seborrheic blepharitis.

More recently in the field of dermatology, many authors have reported the relationship between Malassezia and seborrheic dermatitis. Efficacy of antifungal drugs against seborrheic dermatitis has also been reported and these have now become the first choice for treatment of this condition.

Nelson et al. reported a clinical trial using ketoconazole to treat seborrheic blepharitis. They experienced difficulties in interpreting of the visual analogue scales, and found no difference in the clinical symptoms between the ketoconazole-treated group and the placebo group after 5-weeks of treatment. In the overall clinical appearance, however, there was a difference between the two groups. The report noted that in the ketoconazole-treated group the clinical appearance of 69% of the patients had improved after completion of the trial, as compared to 49% of the placebo group. The authors concluded that Malassezia was related to the development of seborrheic blepharitis.

We also reported a case of seborrheic blepharitis which was treated with oral itraconazole. In this case, many fungal elements of Malassezia were observed in the microscopic examination. Oral itraconazole therapy (100 mg daily for 4 weeks and twice a week for 4 weeks) cured it clinically and mycologically. The result suggested that Malassezia in the lesion was related with the development of seborrheic blepharitis. Since the patient had used topical corticosteroid for a long time before the initial visit, however, we could not eliminate the possibility that this use might have caused "steroid-induced" blepharitis.

In this second case, seborrheic blepharitis was
also indicated in the microscopic examination and we treated it rapidly by the same treatment. In this case, the patient had no history of using a topical corticosteroid. Evidence from the examination and the result of antifungal therapy strongly pointed to *Malassezia* was one of the major causes of seborrheic blepharitis.

As described in our earlier report, the most notable difference between typical seborrheic dermatitis and our 2 cases of seborrheic blepharitis was the formation of fungi in the lesion. In seborrheic dermatitis, *Malassezia* usually forms spores as observed in normal skin. The *Malassezia* found in our 2 cases formed hyphae similar to tinea versicolor. Even in tinea versicolor, however, the reason it is present is unknown. In the first case, we suspected it was a side effect of the long-term topical corticosteroid therapy, but this was not possible in the second case. In any event, it is a completely abnormal finding and suggested the pathogenicity of *Malassezia* in seborrheic blepharitis. Needless to say, it must be related with the amount of lipid secretion, but this would not be the only reason. In addition, this unique evidence also suggests that seborrheic blepharitis is not as same as the seborrheic dermatitis which occurred on the eyelid.

Unfortunately, there are not many reports on the etiology of seborrheic blepharitis published in the field of ophthalmology, especially its relationship with *Malassezia*. In an ophthalmology outpatient clinic doctors may not have instruments like a light microscope and Parker KOH for use in detecting fungi. We speculate that the more frequently such examinations can be made, the more often *Malassezia* will be detected in cases of seborrheic blepharitis. If we are able to detect these fungal elements, antifungal drug will then become one of the choices of treatment.

**References**